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| 10/693,827 | 10/24/2003 | Ralf Moll | MOLL-2 | 1487 |

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EXAMINER

RAPP, CHAD

ART UNIT PAPER NUMBER

2125

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,827

Applicant(s)

MOLL, RALF

Examiner

Chad Rapp

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/24/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Claim 1-21 and presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 9, 11, 20 and 21, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

As to claim 1, line 6 "the original sequence" should be changed to "an original sequence"

- . There is insufficient antecedent basis for this limitation in the claim.

4. If above problems are fixed claims 5, 9 and 19 would be objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 11, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by

WO01/52003.

WO01/52003 teaches the claimed invention (claims 11, 20 and 21) a method for operating a programmable industrial controller, in particular a CNC controller including:

- a. Reconstructing a sequence of control commands from a binary code stored in the controller capable of interpreting and executing the control commands is taught as decoding the transmitted control command(abstract);
- b. Controlling with the reconstructed sequence of control commands a controlled device, such as machine tool is taught as controlling the actuator using the control command that was transmitted and decoded(abstract).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinohara et al. in view of Hoven.

Shinohara et al. teaches the claimed invention (claim 1) substantially as claimed including a method for programming a programmable industrial controller in particular a CNC controller comprising:

- a. Automatically coding into a code a sequence of control commands capable of being interpreted and executed by the controller is taught as compressing original data(abstract);
- b. Supplying the code to the controller is taught as receiving compression code(0027);

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c. Reconstructing the original sequence of the control commands in the controller is taught as decompressing received original data(0002).

Shinohara et al. teaches the above listed details of the independent claim 1, however, Shinohara et al. does not teach: binary code.

Hoven teaches:

a. Binary code is taught as binary code(abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Shinohara et al. with the teachings of Hoven because the Hoven patent uses the binary code as a system to be able to increase security of messages sent over telephone or Internet. Shinohara et al. is interested in security of communications, which Shinohara et al. uses compression. Adding the binary code to Shinohara et al. would greatly increase security of communication.

As to claim 2, Shinohara et al. teaches wherein a least a segment of the binary code representing the sequence of control commands is compressed is taught as compressing original data(abstract).

As to claim 10, Shinohara et al. teaches the use of a programming method for obtaining a binary code is taught as binary code(abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Shinohara et al. with the teachings of Hoven because the Hoven patent uses the binary code as a system to be able to increase security of messages sent over telephone or Internet. Shinohara et al. is interested in security of

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communications, which Shinohara et al. uses compression. Adding the binary code to Shinohara et al. would greatly increase security of communication.

9. Claims 3, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinohara et al. in view of Hoven and further in view of Finnila.

Shinohara et al. and Hoven teach the claimed invention (claim 1) see paragraph number 8 above.

As to claim 3, Finnila teaches wherein the binary code representing the sequence of control commands is encrypted is taught as encryption (Introduction section page 404).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Shinohara et al. with the teachings of Finnila because Finnila increases high compression ratio and strong encryption. The encryption factor increases the security of communication in Shinohara et al.

As to claim 6, Finnila teaches wherein the encrypted binary code comprises a user code which restricts execution of the sequence of control commands to a particular user is taught as different keys for different uses(page 406).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Shinohara et al. with the teachings of Finnila because Finnila increases high compression ratio and strong encryption. The encryption factor increases the security of communication in Shinohara et al.

As to claim 7, Finnila teaches wherein the encrypted binary code comprises a comment for the sequence of control commands is taught as data strings(page 405).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Shinohara et al. with the teachings of Finnila because Finnila increases high compression ratio and strong encryption. The encryption factor increases the security of communication in Shinohara et al.

10. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinohara et al. in view of Hoven in view of Finnila and further in view of Murphy.

Shinohara et al. and Hoven teach the claimed invention (claim 1) see paragraph number 8 above.

As to claim 4, Murphy teaches wherein the binary code includes a usage limitation that limits usage of the sequence of control commands is taught as message may not exceed a certain length(0073).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Shinohara et al. with the teachings of Murphy because when the code is limited in is easier to keep secure because the more information in a secure code the easier it is to crack the code.

As to claim 8, Murphy teaches wherein the binary code is encrypted with a public key is taught as a public key(0015)

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Shinohara et al. with the teachings of Murphy the public key is a type of encryption device which increases the security of communication in Shinohara et al.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO01/52003 in view of Shinohara et al.

WO01/52003 teaches the claimed invention (claim 11) see paragraph number 6 above.

As to claim 12, Shinohara et al. teaches wherein a least a segment of the binary code representing the sequence of control commands is compressed is taught as compressing original data(abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of WO01/52003 with the teachings of Shinohara et al. because Shinohara et al. uses compression and decompression aspects just like WO01/52003 uses compression and decompression aspects.

13. Claims 13, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO01/52003 in view of Finnila.

WO01/52003 teaches the claimed invention (claim 11) see paragraph number 6 above.

As to claim 13, Finnila teaches wherein the binary code representing the sequence of control commands is encrypted is taught as encryption (Introduction section page 404).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of WO01/52003 with the teachings of Finnila because Finnila increases high compression ratio and strong encryption. The encryption factor increases the security of communication in Shinohara et al.

As to claim 16, Finnila teaches wherein the encrypted binary code comprises a user code which restricts execution of the sequence of control commands to a particular user is taught as different keys for different uses(page 406).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of WO01/52003 with the teachings of Finnila because Finnila increases high compression ratio and strong encryption. The encryption factor increases the security of communication in Shinohara et al.

As to claim 17, Finnila teaches wherein the encrypted binary code comprises a comment for the sequence of control commands is taught as data strings(page 405).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of WO01/52003 with the teachings of Finnila because Finnila increases high compression ratio and strong encryption. The encryption factor increases the security of communication in Shinohara et al.

14. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO01/52003 in view of Finnila and further in view with Murphy.

WO01/52003 teaches the claimed invention (claim 11) see paragraph number 6 above.

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As to claim 4, Murphy teaches wherein the binary code includes a usage limitation that limits usage of the sequence of control commands is taught as message may not exceed a certain length(0073).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of WO01/52003 with the teachings of Murphy because when the code is limited in is easier to keep secure because the more information in a secure code the easier it is to crack the code.

As to claim 8, Murphy teaches wherein the binary code is encrypted with a public key is taught as a public key(0015)

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of WO01/52003 with the teachings of Murphy the public key is a type of encryption device which increases the security of communication in Shinohara et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Rapp whose telephone number is (571)272-3752. The examiner can normally be reached on Mon-Fri 11:00-7:00.

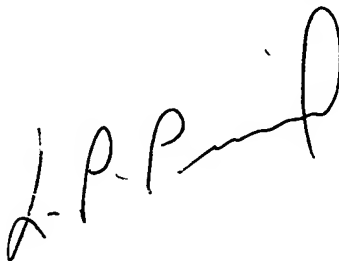
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571)272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chad Rapp
Examiner
Art Unit 2125

cjr

A handwritten signature in black ink, appearing to read "L. P. Picard", with a large, stylized loop at the end.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100